

Work Order ID 161786

161786

Page 1

Tuesday, May 23, 2017 9:41:27 AM

Item ID: 646.9701 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Cutter Sub Assembly
 Start Date: 6/1/2017 Start Qty: 3.00 *3* Cust Item ID:
 Required Date: 6/6/2017 Req'd Qty: 3.00 *3* Customer:
 Reference:

Approvals: Process Plan: DAS Date: MAY 23 2017 Tooling: _____ Date: _____ Run Start *NR1*
 QC: 21 Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
646.9700	REV D2

110 Pick Kit 0.00

110

Packaging Memo 0.00

Packaging

3 MAY 29 2017 DAS 6 9-89

120 0.00

120

Small Fab Memo 0.55

Small Fab

Assemble as per dwg and apply loctite 598 on all faying surfaces per note .

A/R RTV LOCTITE 598: 137353
 exp. date: 02/19

3X 17/06/01 DAS 36 9-89

130 QC5- Inspect part completeness to step on W/O 0.00

130

QC Memo 0.06

Quality Control

3 DAS 38 9-89 JUN 02 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																											
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																							
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																							
Root Cause		FAULT CATEGORY																																																													
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :	
Misidentified ☐	Past Due ☐																																																														

Work Order ID 161786***161786***

Page 2

Tuesday, May 23, 2017 9:41:28 AM

Item ID: 646.9701 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Cutter Sub Assembly
Start Date: 6/1/2017 Start Qty: 3.00 ***3*** Cust Item ID:
Required Date: 6/6/2017 Req'd Qty: 3.00 ***3*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Identify as per dwg & Stock Location: CC1007	0.00							
140						3	JUN 02 2017		DA 6 8:00
Packaging	Memo	0.03							
Packaging	***IDENTIFY AS PER IAW MPP-120***								
150	QC21- Final Inspection - Work Order Release	0.00							
150									17/6/17
QC	Memo	0.30							
Quality Control									

JUN 02 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER :							
Misidentified ☐	☐	Past Due								

Picklist Print

Tuesday, May 23, 2017 9:41:23 AM

Page 1

Work Order ID: 161786

161786

Parent Item: 646.9701

646 9701

Parent Item Name: Cutter Sub Assembly

Start Date: 6/1/2017

Required Date: 6/6/2017

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP REV:A 12.08.13 NEW ISSUE DD VERF:JFS
:B AS PER REV D 16-03-07 JLM VERIFIED BY:JFS

IPP REV

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status	
646.9710 *646 9710* Body		Manufactured	No			110	Each	12.0000	1	3				
										**	MAY 29 2017			DAS 6 9-89
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>						
				cck012		12								
				156762		2								
				157197		10								
646.9711 *646 9711* Blade		Manufactured	No			110	Each	18.0000	2	6				
										**	MAY 29 2017			DAS 6 9-89
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>						
				CCK106		18								
				156758		3								
				157192		15								
MS27039-08-19 *MS27039-08-19* Screw		Purchased	No			110	Each	453.0000	6	18				
										**	MAY 29 2017			DAS 6 9-89
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>						
				GA		30								
				m135948		26								
				m137178		4								
				over006		200								
				m137464		200								
				ST277		223								
				m135865		5								
				m137320		18								
				m137361		200								

DAS
6
9-89

DAS
6
9-89

DAS
6
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER : ☐			
Misidentified ☐	☐	Past Due	☐				

Picklist Print

Page 2

Tuesday, May 23, 2017 9:41:23 AM

Work Order ID: 161786

161786

Parent Item: 646.9701

646.9701

Parent Item Name: Cutter Sub Assembly

Start Date: 6/1/2017

Required Date: 6/6/2017

Start Qty: 3.00

Required Qty: 3.00

NAS1149FN832P

Purchased

No

110

Each

1,971.000

12

36

NAS1149FN832P

**

MAY 29 2017

Washer

Location

Loc Qty

Loc Code

GA

358

M135058

208

M136182

40

M136866

110

ST263

1613

M135603

11

M137412

1602

36

MS21042L08

Purchased

No

110

Each

913.0000

6

18

MS21042L08

**

MAY 29 2017

Nut

Location

Loc Qty

Loc Code

GA

100

m135274

6

m135978

94

ST303

813

m137391

513

m137464

300

18

DAS
6
9-89

DAS
6
9-89

Tuesday, May 23, 2017 9:41:23 AM

Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER :							
Misidentified ☐	☐	Past Due								



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

05360

SHEET 1 OF 1

DWG NO. 646.9700

REV: D

PREPARED BY J. BECKER

DATE: 03/24/16

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: CUTTER SUB ASSY

APPROVED BY:

ENGR.

MFG

QC

EFF.

CURRENT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: REVISED DIMENSIONS

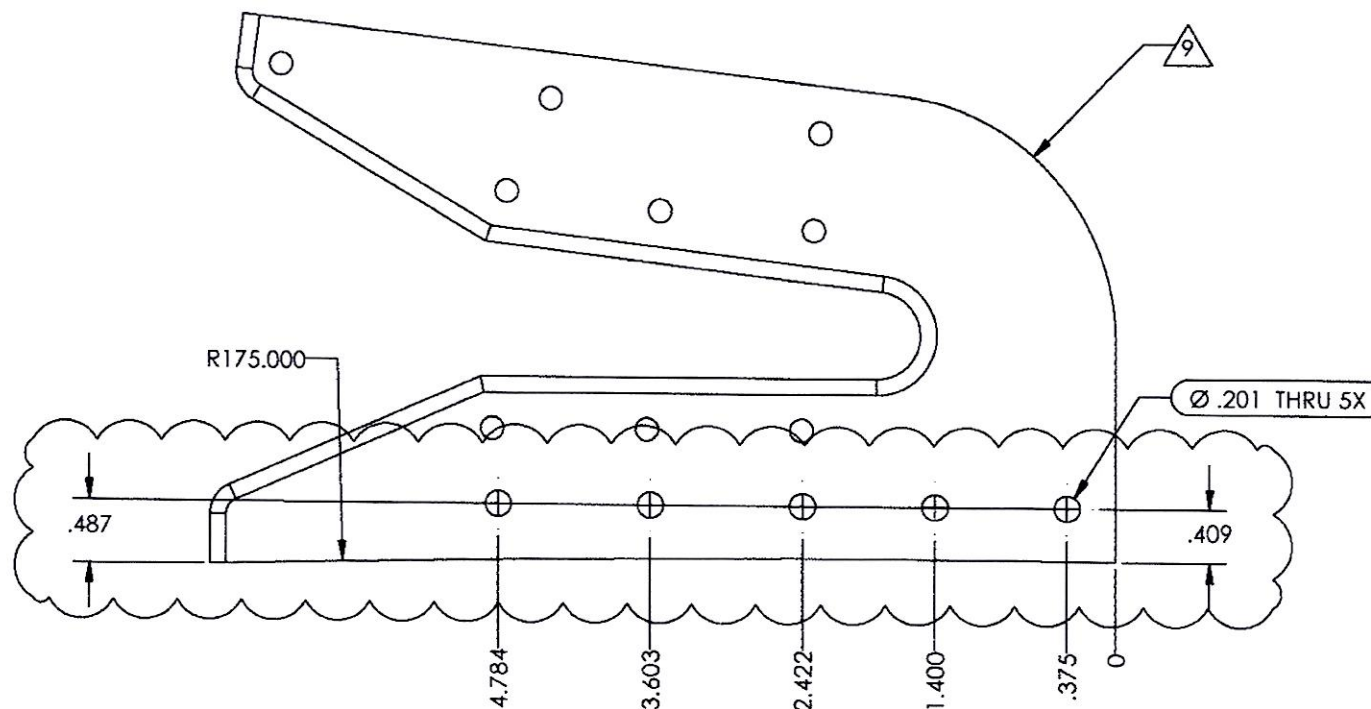
ECR:

N/A

ACTION ITEM:

1.

SHEET 7, ZONE C3 IS:



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 161786 MLJ
1705-23

DOCUMENTS EFFECTED:

☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO

PRINTED COPY OF THIS DOCUMENT IS FOR REFERENCE ONLY AND IS UNCONTROLLED



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

05345

SHEET 1 OF 1

DWG NO. 646.9700

REV: D

PREPARED BY J. GARDINER

DATE: 03/15/16

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: CUTTER SUB ASSY

APPROVED BY: ENGR. [Signature]

MFG [Signature]

QC [Signature]

EFF. CURRENT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: REVISED NOTES

ECR: N/A

ACTION ITEM:
1.

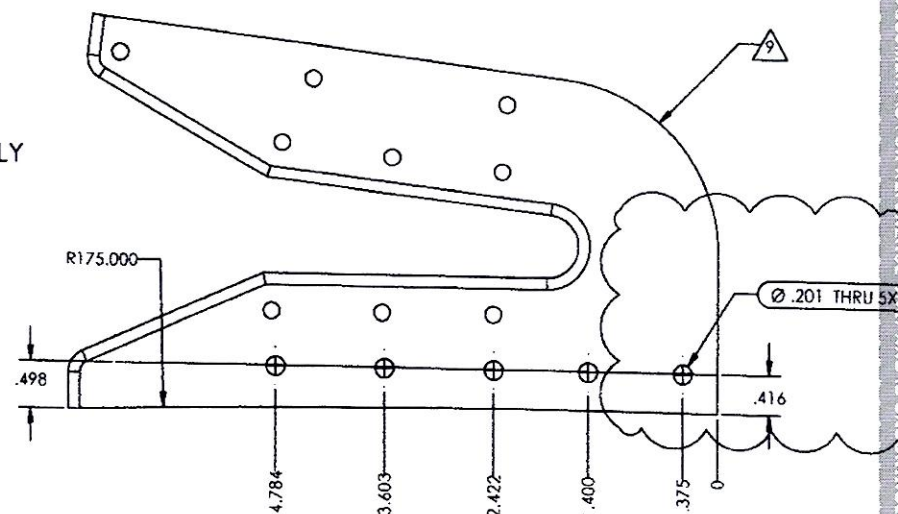
SHEET 1, ZONE A6 IS:

NOTES:

IS

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH IAW MPP-172 SECTION 2.1, 3.3 & 4.3.
- 3 MATERIAL: AISI A2 TOOL STEEL
CONDITION: ANNEALED
POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MPP-172 SECTION 3.3; 1-2 MIL MAX
5. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
6. IDENTIFY IAW MPP-120
- 7 APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
- 9 ALL DIMENSIONS NOT SPECIFIED ARE CONTROLLED BY 646.9710.

SHEET 7, ZONE C5 IS:



DOCUMENTS EFFECTED:

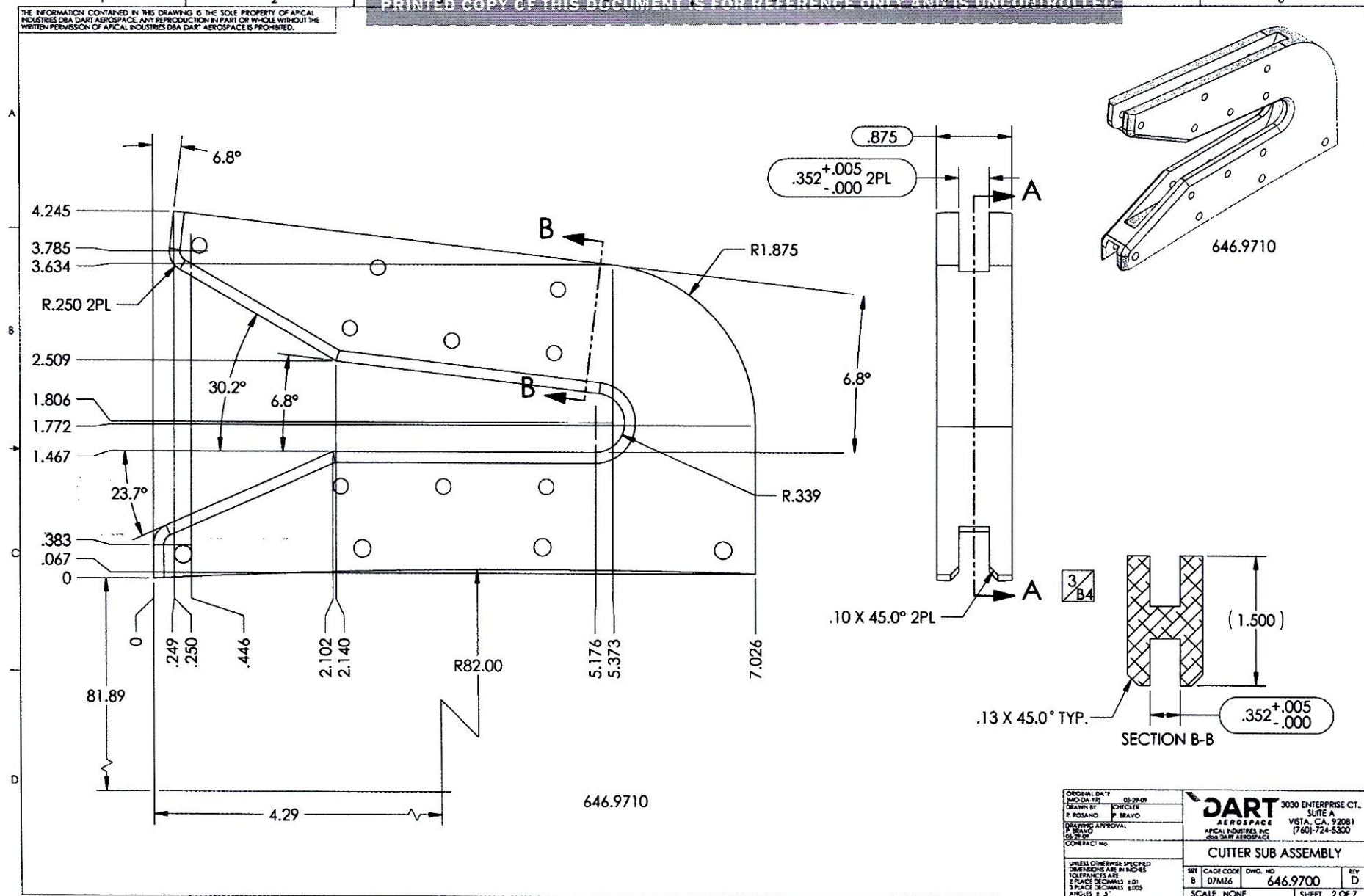
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☐ YES ☒ NO

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

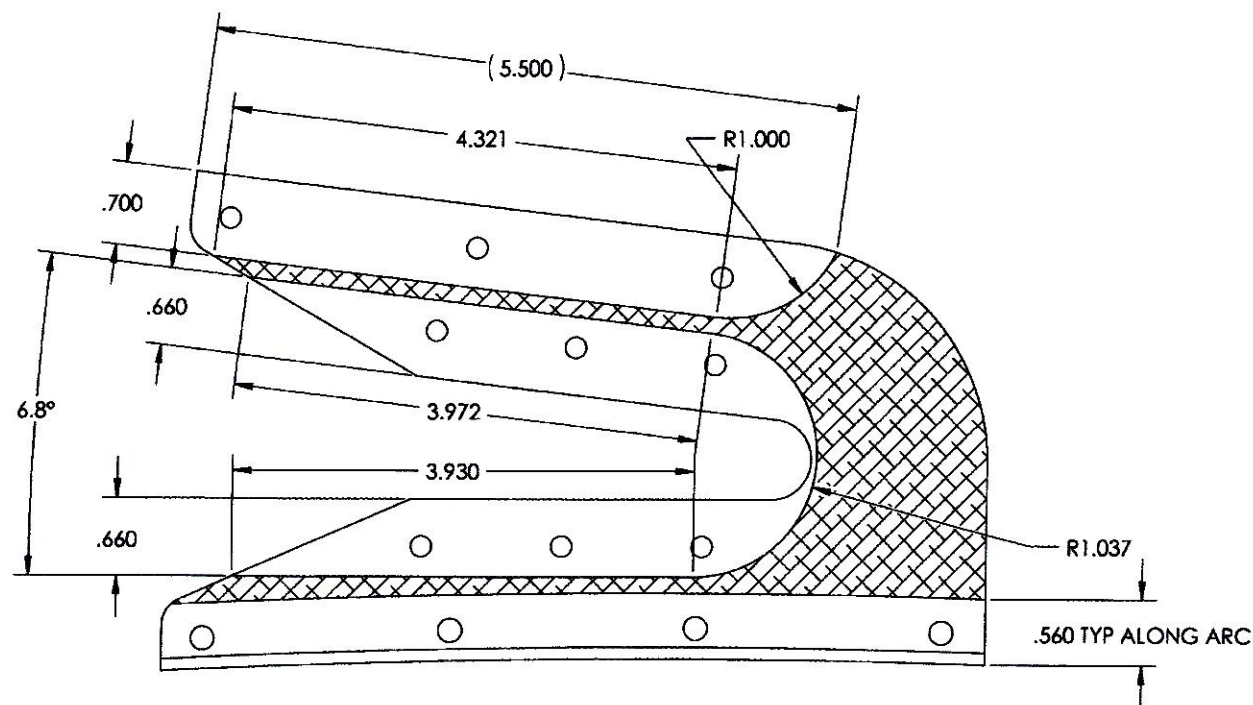
PRINTED COPY OF THIS DOCUMENT IS FOR REFERENCE ONLY AND IS UNCONTROLLED



ORIGINAL DATE 05-29-09	3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760)-724-5300
DRAWN BY P. ROSANO	CHECKED BY P. BRAVO
DRAWING APPROVAL P. BRAVO	APICAL INDUSTRIES INC. (DBA DART AEROSPACE)
CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°	
SHEET B	CAGE CODE 07M26
DWG. NO. 646.9700	REV. D
SCALE NONE	SHEET 2 OF 7

PRINTED COPY OF THIS DOCUMENT IS FOR REFERENCE ONLY AND IS UNCONTROLLED

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



SECTION A-A

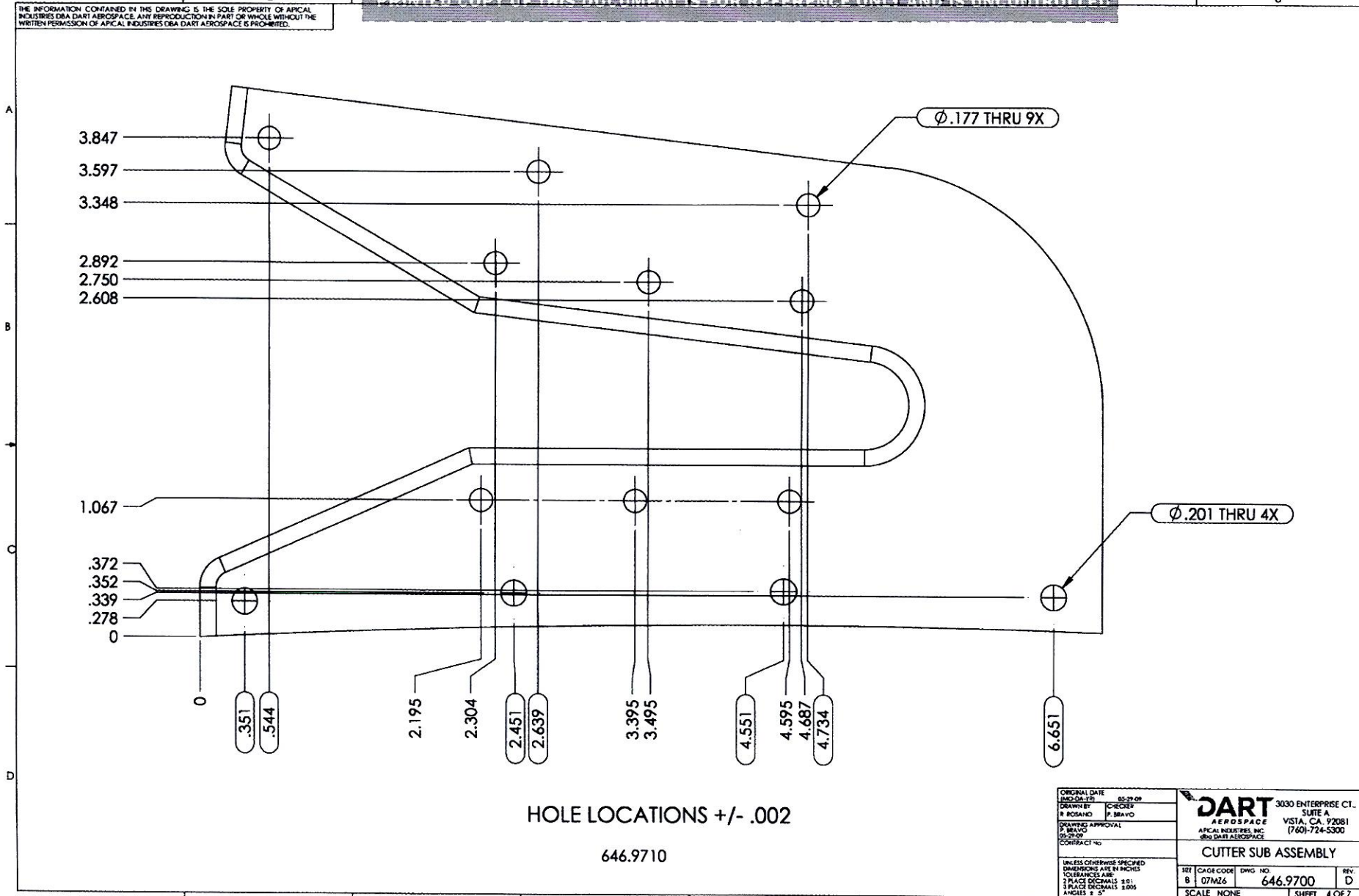
646.9710

ORIGINAL DATE UNCLASSIFIED 05/29/01		DART 3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY R. ROLAND		APICAL INDUSTRIES INC. DBA DART AEROSPACE	
CHECKED BY P. BRAVO		CUTTER SUB ASSEMBLY	
DRAWING APPROVAL 05/29/01		SCALE NONE	
CONTRACT NO.		SHEET 3 OF 7	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.001 ANGLES ±.5°		REV B 07M26 646.9700 D	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

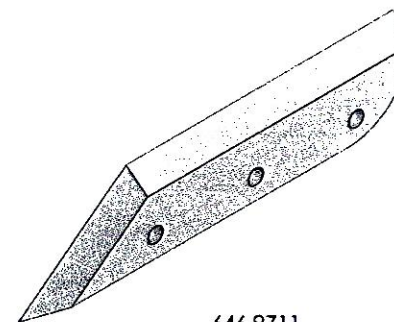
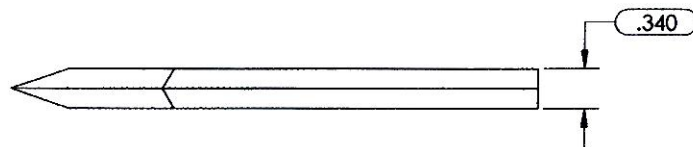
PRINTED COPY OF THIS DOCUMENT IS FOR REFERENCE ONLY AND IS UNCONTROLLED

8

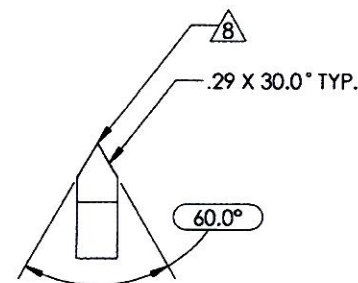
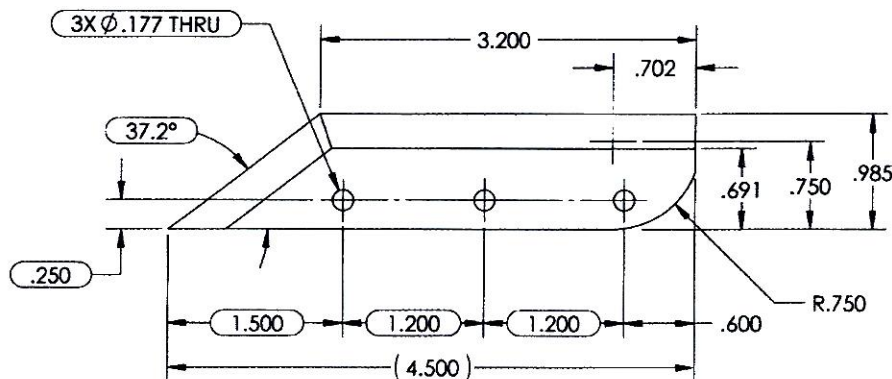


ORIGINAL DATE 10/20/09	DESIGNED BY C. CROSBY	DART AEROSPACE APICAL INDUSTRIES, INC. DBA DART AEROSPACE	3030 ENTERPRISE CT., SUITE A VISTA, CA, 92081 (760)-724-5300
DRAWN BY R. ROSAND	P. BRAVO		
DESIGNER APPROVAL P. BRAVO 10/20/09	CONTRACT NO.	CUTTER SUB ASSEMBLY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		REV. B 07/26	Dwg. NO. 646.9700 SCALE NONE SHEET 4 OF 7

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DSA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DSA DART AEROSPACE IS PROHIBITED.



646.9711



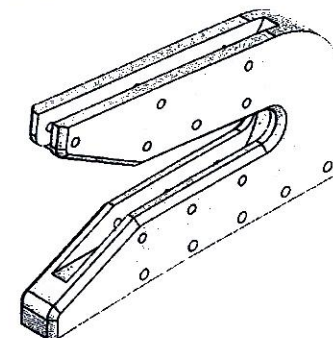
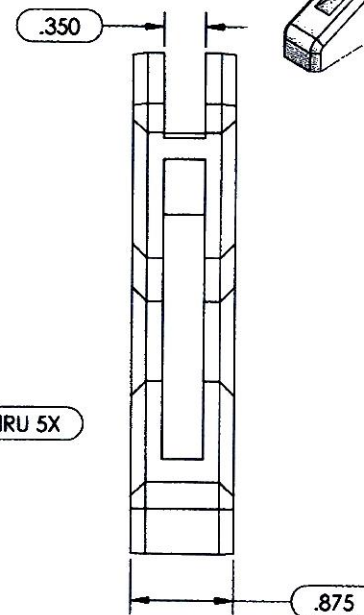
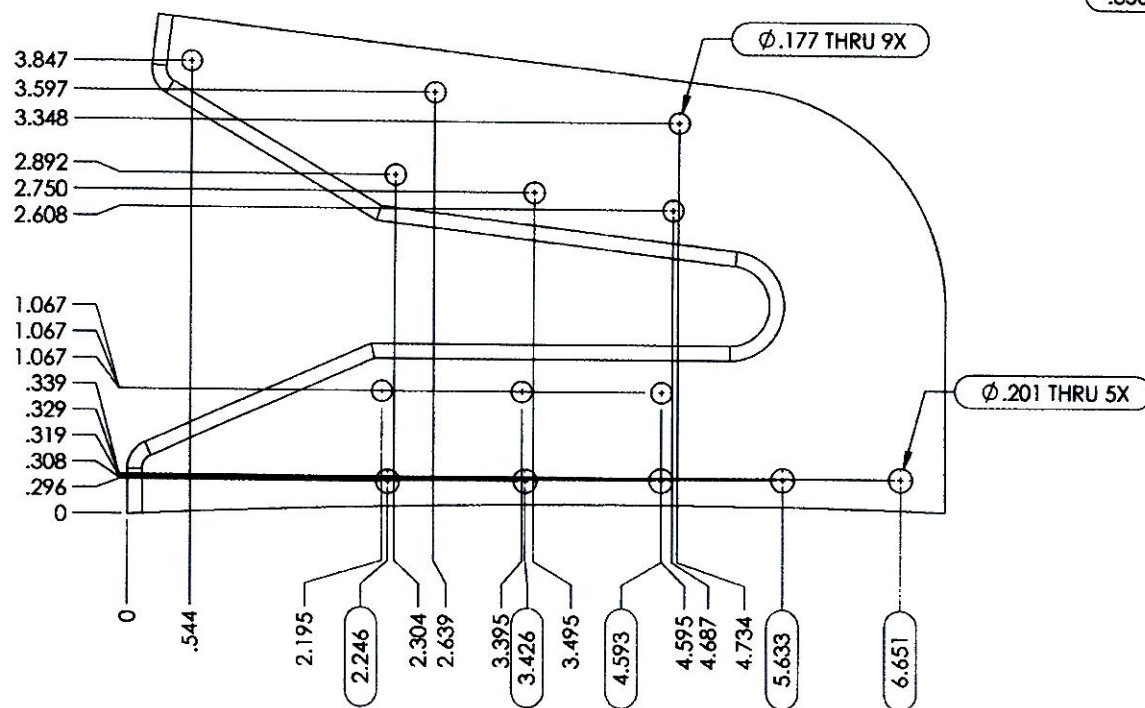
646.9711

ORIGINAL DATE: 05-29-09		3030 ENTERPRISE CT., SUITE A	
DRAWN BY: J. CROCKER		VISTA, CA. 92081	
R. ROSARIO		(760)-724-5300	
DESIGNED BY: P. BRAVO		APICAL INDUSTRIES INC.	
DRAWING APPROVAL: P. BRAVO		DSM DART AEROSPACE	
DATE: 05-29-09			
CONTRACT NO.			
CUTTER SUB ASSEMBLY			
UNLESS OTHERWISE SPECIFIED	SIZE: B	CAGE CODE: D7M26	DWG. NO: 646.9700
DIMENSIONS ARE IN INCHES			REV. D
TOLERANCES ARE:			
2 PLACE DECIMALS ±.01			
3 PLACE DECIMALS ±.005			
ANGLES ±.5°			
SCALE: NONE	SHEET: 5 OF 7		

1
2
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

PRINTED COPY OF THIS DOCUMENT IS FOR REFERENCE ONLY AND IS UNCONTROLLED

8



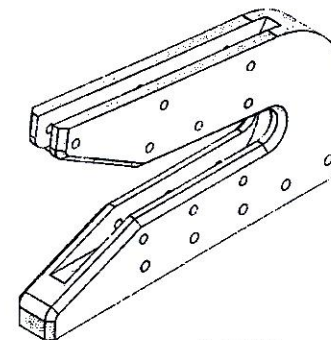
646.9712 9

646.9712

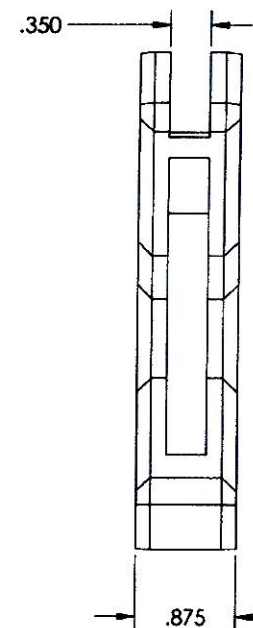
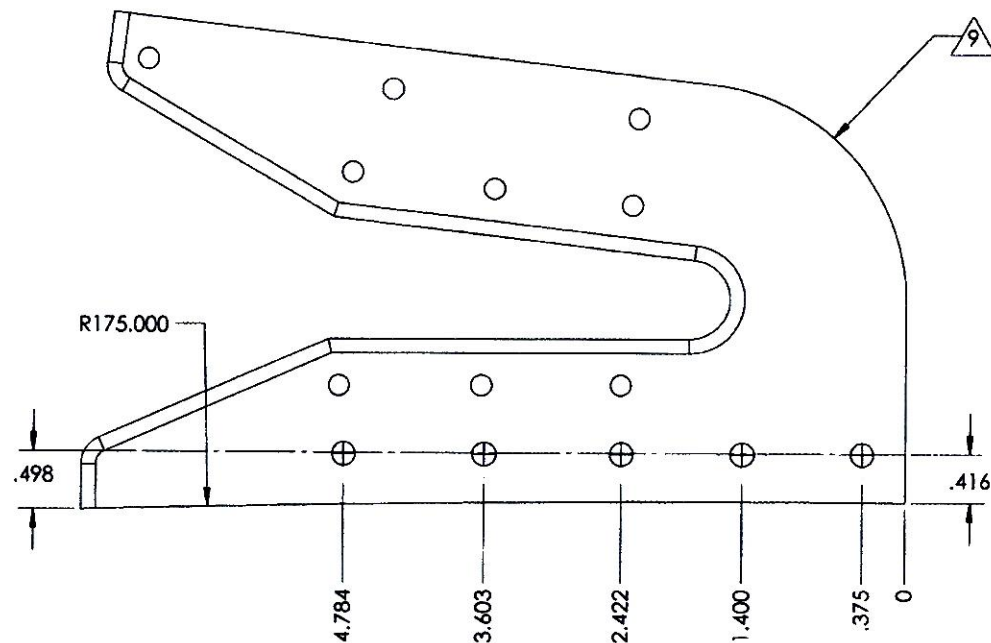
ORIGINAL DATE 10-01-09		3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760) 724-5300			
DRAWN BY E. ROSANO	CHECKED P. BRAYO	DART AEROSPACE APICAL INDUSTRIES, INC. DBA DART AEROSPACE			
DRAWING APPROVAL P. BRAYO 10-26-09	CONTRACT NO.				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS .005 ANGLES $\pm .5^\circ$		REV B	DATE CODE 07M16	DWG. NO. 646.9700	REV D
SCALE NONE		SHEET 6 OF 7			

PRINTED COPY OF THIS DOCUMENT IS FOR REFERENCE ONLY AND IS UNCONTROLLED

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



646.9713



ORIGINAL DATE: 05-29-09
 DRAWN BY: CHICKER
 P. ROSE-HO
 P. BRAYC
 DRAWING APPROVAL
 P. BRAYC
 05-29-09
 CONTRACT NO.

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 TOLERANCES ARE:
 2 PLACE DECIMALS .001
 3 PLACE DECIMALS .0005
 ANGLES 1° 5'

DART 3030 ENTERPRISE CT., SUITE A
 AEROSPACE VISTA, CA. 92081
 APICAL INDUSTRIES INC. (760)-724-5300
CUTTER SUB ASSEMBLY
 SET CAGE CODE: 646.9700
 B 07A26
 SCALE: NONE
 SHEET 7 OF 7

Work Order ID 161790

Tuesday, May 23, 2017 9:41:40 AM

161790

Page 1

Item ID: D2690-6

Revision ID:

Item Name: Lanyard

Start Date: 5/31/2017

Start Qty: 12.00

Required Date: 6/2/2017

Req'd Qty: 12.00

Reference:

Accept

N900040100

Setup Start ***NS1***

Stop ***NS2***

Cust Item ID:

Customer:

Approvals:

Process Plan:

DAS

21

Date: MAY 23 2017

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2690

Rev B2



100

100

Small Fab

Small Fab

Small Fab

0.00

Memo

Manufacture as per Dwg D2690

0.60

12x

17/06/06

DAS
36
9-89

110

110

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.24

12

DAS
38
9-89

JUN 06 2017

120

120

Packaging

Packaging

Identify as per dwg & Stock Location

0.00

Memo

0.12

12x

JUN 06 2017

DAS
26
9-89

FA 009

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 161790***161790***

Page 2

Tuesday, May 23, 2017 9:41:40 AM

Item ID: D2690-6 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Lanyard
Start Date: 5/31/2017 Start Qty: 12.00 ***12*** Cust Item ID:
Required Date: 6/2/2017 Req'd Qty: 12.00 ***12*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC21- Final Inspection - Work Order Release	0.00							
130									
QC	Memo	1.20							
Quality Control									


JUN 06 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

Picklist Print

Tuesday, May 23, 2017 9:41:39 AM

Page 1

Work Order ID: 161790

161790

Parent Item: D2690-6

D2690-6

Parent Item Name: Lanyard

Start Date: 5/31/2017

Required Date: 6/2/2017

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP: CC03.04.04Reformat; Incorporated D2690-XKJ/RF

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
CBL-1240 *CBI -1240* Cable		Purchased	No			110	f	130.4827	1	12		17/06/06	DAS 36 9-88
				<u>Location</u>				<u>Loc Qty</u>					
				GA				130.4827488					
				m136491				47.6052488		12			
				m136852				82.8775					
CBL-460 *CBI -460* Loop Sleeve		Purchased	No			100	Each	234.0000	2	24		17/06/06	DAS 36 9-88
				<u>Location</u>				<u>Loc Qty</u>					
				GA				234					
				m136852				10		24			
				m137339				224					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER : _____							
Misidentified ☐	☐	Past Due								